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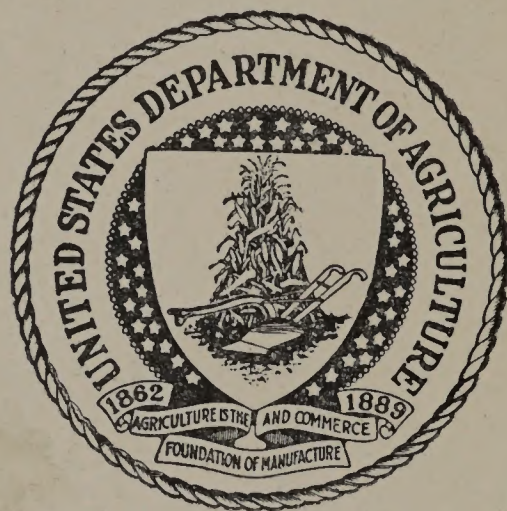


TONGASS NATIONAL FOREST ALASKA

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

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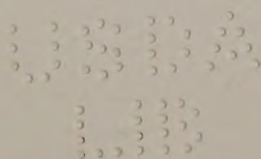


UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE • ALASKA REGION

COVER PHOTO—*Baranof Island, City of Sitka, Tongass National Forest, Alaska.—Photographed by Alaska Aerial Survey Expedition of the Navy Department conjointly with the Forest Service and Geological Survey.*

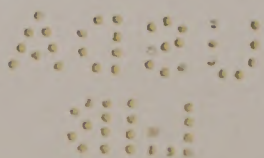
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1940





Auke Lake, in front of Mendenhall Glacier, Tongass National Forest, near Juneau, Alaska.



A Region of Fiords and Forests—Nature Unchanged

Foreword

THE FRONTIER holds an inherent appeal to the people of America whose forebears spread over this new continent. They respond to mention of Alaska with visions of silent expanses, northern lights, midnight sun, feverish gold rushes, herds of big game, and the outdoor life.

The stirring days of colorful incidents and characters may be gone, and the lure of gold may no longer tempt people to migrate to the Territory in search of adventure and a stake, but it retains other more permanent attractions. Alaska still has the charm and crispness of a vast wilderness. Despite its many primitive features, however, in many ways it has kept step with modern progress.

On the map in this booklet, the panhandle, or southeastern Alaska region, small as it seems in comparison with the Territory's 586,000 square miles, may be seen to have respectable dimensions. It is some 350 miles long and 120 miles wide, with a land area of about 22,738,000 acres (35,527 square miles). Nearly all the region is owned by the United States Government. At various times between 1902 and 1909 President Theodore Roosevelt set aside lands from this public domain for conservation purposes. Now more than 16,000,000 acres, with all resources thereon, are under planned management as the Tongass National Forest. The principal lands excluded are municipalities, Glacier Bay National Monument, and Annette Island Indian Reservation. Alaska also has another national forest, the Chugach, which has an area of nearly 4,800,000 acres and includes the timber belt on the shores of Prince William Sound.

Because of the warming Japan Current, the region of the Tongass Forest may be reached readily the year round. The mean winter temperatures at the various towns lie between 23.5° and 35° F. The January mean at Sitka is 4.2° higher than at Boston, Mass., and only 1.5° lower than at Washington, D. C. At Sitka on only 16 days during 40 years of record has the temperature fallen to zero or lower. The mean summer temperature is between 50° and 57°. The

heavy precipitation, the yearly mean being 84 inches at Juneau, 87 inches at Sitka, and 152 inches at Ketchikan, contributes to the luxuriant growth of timber and other vegetation. The driest months are May, June, and July. Much of the winter precipitation at sea level comes as rain.

The national forests of Alaska are being developed by the Forest Service under policies and methods that will insure their continuous productivity in order that they may support and help to build well-rounded, stable communities. All of their resources are available for conservative use. Stumpage may be purchased for the development and support of timber-using industries; lands valuable for agriculture, mining, industrial plants, and town sites may be patented under the public-land laws; and areas needed for water-power development, canneries, fur farms, residences, and other special purposes may be leased. The forests are managed by resident officers, and only questions of general policy are referred to Washington, D. C. The chief officer in Alaska is the regional forester, with headquarters in Juneau. Forest-ranger headquarters are at Ketchikan, Petersburg, and Juneau. Seven launches are maintained for field work along the coast.

Almost 1,000 miles of trails have been constructed by the Forest Service throughout the Tongass Forest for use by recreation seekers, hunters, fishermen, and prospectors. Numerous shelter cabins have been placed at important points along the travel routes.

Timber Resources and Water Power

EVERYWHERE in this region of Alaska trees and underbrush grow in almost tropical density. The forest cover extends from tidewater to about 2,000 feet altitude.

Because of the sinuous coast the timber is readily available, 75 percent of that having commercial value estimated to be within $2\frac{1}{2}$ miles of tidewater. The average volume per acre of the commercial timber is around 26,000 board feet; some sawlog tracts average 40,000 to 50,000. On the Tongass Forest the total estimated stand of commercial timber is 78 billion board feet, consisting of about three-fourths western hemlock and one-fourth Sitka spruce, with some western red cedar and Alaska cedar. Most of the merchantable trees are 2 to 4 feet in diameter and 90 to 140 feet high.

Sitka spruce is the most valuable tree of all Alaska and one of the most useful in the United States for general utility purposes. Its fiber is unequaled by that of any other Pacific coast tree for the manufacture of wood pulp. The national forest supplies spruce to meet most of the present sawmill requirements of southeastern Alaska. Western hemlock is used as piling in building wharves and fish traps. It also makes excellent mechanical and sulphite pulps. The cedars, little used at present, are valuable chiefly for shingles, telephone poles, and specialized forms of lumber.

Timber on the Tongass will be of greatest use when mills are established in the region to manufacture newsprint paper, for which the timber is well-suited. The Forest Service estimates that, under proper management, forests of the region would produce $1\frac{1}{2}$ million or more cords of pulpwood annually in perpetuity; that is the equivalent of a million tons of newsprint, or more than one-fourth the present yearly consumption of the United States. At the present time, however, the timber output is very small.

Second in importance only to timber in development of a newsprint industry is cheap and abundant power, and water power is available on the Tongass in units suitable for single industrial plants. The best sites have capacities of 5,000 to 30,000 horsepower and can be developed economically for year-round use. A typical power site has a high "hanging lake" a short distance inland where water can be stored. Only a short conduit is needed to carry the water

to a powerhouse at tidewater, where the power can be used in manufacturing paper, making transmission lines unnecessary. By the use of short transmission lines, power from a number of sites could be concentrated readily at one industrial plant, if so desired.

A survey of the principal known power sites of this region has been made by the Forest Service, Geological Survey, and Federal Power Commission. The year-round capacity of all the sites covered is about 800,000 horsepower. Fifty power sites with an aggregate capacity of 22,000 horsepower are now in use. All water-power sites are publicly owned and may be leased under the Federal Power Act for periods of as long as 50 years.

Mixed spruce and hemlock stand at Polk Inlet, Tongass National Forest, Alaska.

F-253188





FS-Z24

Long Lake, Tongass National Forest, south of Juneau, Alaska. Area, 1,180 acres; elevation, 803 feet; distance from tidewater, 2 miles; potential horsepower, 32,000.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.

Recreation Opportunities

PLEASURE BOATING ON THE FIORDS.—Each year more and more boats of all sizes and descriptions cruise the Tongass waters. But for full enjoyment of the back country—the out-of-the-way places where the sights, sounds, and smells of man-made environment disappear and there is restful silence, the soft calls of wild fowl, the pleasant woodsy odor of virgin forests, and grand views of winding fiords and lofty mountains—take a small boat and a small party.

Ketchikan, first port of entry in Alaska, offers a scenic trip around Revillagigedo Island, upon which the city is located. Prominent features along the eastern or mainland shore of Behm Canal are New Eddystone Rock, Rudyerd Bay, and Walker Cove. The first named is a pinnacle which rises like a vine-clad tower for 250 feet above the water in the main sea channel. George Vancouver named it after breakfasting on the sandy beach surrounding its narrow base. Rudyerd Bay and Walker Cove are long, narrow, winding arms of the sea cut into the rugged granite mountain mass of the mainland. Here the shores rise almost sheer, in some places as high as 2,000 feet, beribboned with sparkling streams and waterfalls which have their origin in the perpetual snowfields above. Another trip which may be taken from Ketchikan disclosing similar features of quiet, rugged beauty leads through Portland Canal, a long, narrow body of water extending almost 100 miles inland and constituting the southern boundary between Canada and Alaska.

A cruise of the west coast of Prince of Wales Island reveals a region of less rugged topography than the mainland with its lofty Coast Range. There are hundreds of curiously shaped islands of intricate land detail, separated by quiet, winding channels with many splendid harbors—a delight to yachtsmen and motorboat enthusiasts.

Adjacent to Petersburg is the famous Wrangell Narrows, some 21 miles long and in places not more than 100 yards wide. In the course of its windings, this waterway presents a fascinating land and seascape. It is an ocean bottleneck traversed by nearly all the vessels that ply Alaska waters.

Le Conte Glacier, set in a deep canyon at the head of Le Conte Bay east of Petersburg, is the most southerly tidewater glacier on the coast. During periods

of spring tides and off-shore winds, hundreds of bergs discharged by this river of ice may sometimes be seen near Petersburg. Commercial fishermen use them as a source from which to replenish their ice supplies. Le Conte Bay was originally called Hutli (Thunder) Bay by the Stikine Indians. North of Petersburg, the face and winding course of Baird Glacier may be seen at the head of Thomas Bay, the latter a beautiful feature in its own right.

The rugged mountain range of the mainland along Frederick Sound from Stikine River to Cape Fanshaw forms a panorama described by Captain Meade of the Vancouver expedition in 1794 as "uncommonly awful" and "horribly magnificent." The Devils Thumb, a peak 9,077 feet high with an almost per-

This sheer monolithic cliff, rugged but beautiful, rises abruptly from the shores in the Punch Bowl Area of Rudyerd Bay, Behm Canal, Tongass National Forest. Important water-power resources are located at the head of this bay.

F-368244





Map of Revillagigedo Island and vicinity of Ketchikan, Tongass National Forest, Alaska.

pendicular shaft rising 1,662 feet above the crest of the mountain range, is most impressive.

The 160-mile trip up the Stikine River to Telegraph Creek, in interior British Columbia, is a trip many Tongass Forest visitors take. During the summer months comfortable, shallow-draft river steamers leave Wrangell weekly to travel along the broad lower valley of this stream and through the narrow canyons of its upper reaches.

Boat trips may be made out of Juneau in all directions. To the southeast is Taku Inlet with famous Taku Glacier at its head. This is an active glacier more than a mile wide with a face of 200 to 300 feet high. Summer tourist steamers regularly run close to the face of Taku Glacier where atmospheric vibration from a blast on the whistle is sometimes sufficient to cause a mighty iceberg to crash into the sea. A number of other active glaciers in their characteristic settings may be seen by using a small boat to travel up Taku River.

On the mainland farther south is Tracy Arm, 20 miles of narrow fiord with high, precipitous sides, containing floating icebergs of all sizes discharged by the two glaciers at its head. Boats should not attempt to stay overnight at Tracy Arm because there is no safe anchorage and floating ice constitutes a real danger. A similar fiord, but not as long, is Fords Terror in Endicott Arm. People who have traveled extensively rate these two fiords unsurpassed in rugged grandeur.

Lynn Canal runs northward from Juneau toward Chilkoot Barracks, Haines, and Skagway, the latter about 100 miles distant. Along both sides of this stretch of water are scenic glaciers, high mountains, and steep valleys.

Glacier Bay National Monument, under administration of the National Park Service and adjacent to the Tongass National Forest on the north, is easily the most accessible of the large glacier areas of the world. Little known at present, this bay should be one of the show places of the Western Hemisphere. Here mighty glacial remnants of the ice age still grind steadily on the massive buttresses of the Coast Range, topped by Mt. Fairweather which rises 15,300 feet from tidewater.

Yachtsmen who do not mind leaving Cross Sound for some open water toward the northwest may visit Lituya and Yakutat Bays, the northernmost limits of the Tongass National Forest. To enter Lituya (first visited by the French explorer La Perouse in 1786) it is necessary to sail through a narrow turbulent "Skookum Chuck" which is passable only at slack tide and in calm weather. The combination of narrow, deep seaways indented in the base of the lofty Fairweather Range, moving glaciers, heavily forested shores, and crescent-shaped sandy beaches presents a picture which La Perouse described as perhaps the most spectacular in the world.



GS-Y17C

Rugged grandeur of Glacier Bay—Grand Pacific Glacier. The Glacier Bay National Monument, adjacent to the Tongass National Forest on the north is administered by the National Park Service.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.

Three well-forested, rugged islands, between 876,000 and 1,346,000 acres in area, are located at the northern end of the Tongass Forest. They are Admiralty, Baranof, and Chichagof. A boat trip around any one of them carries the voyager into back country and reveals hundreds of sinuous quiet waterways.

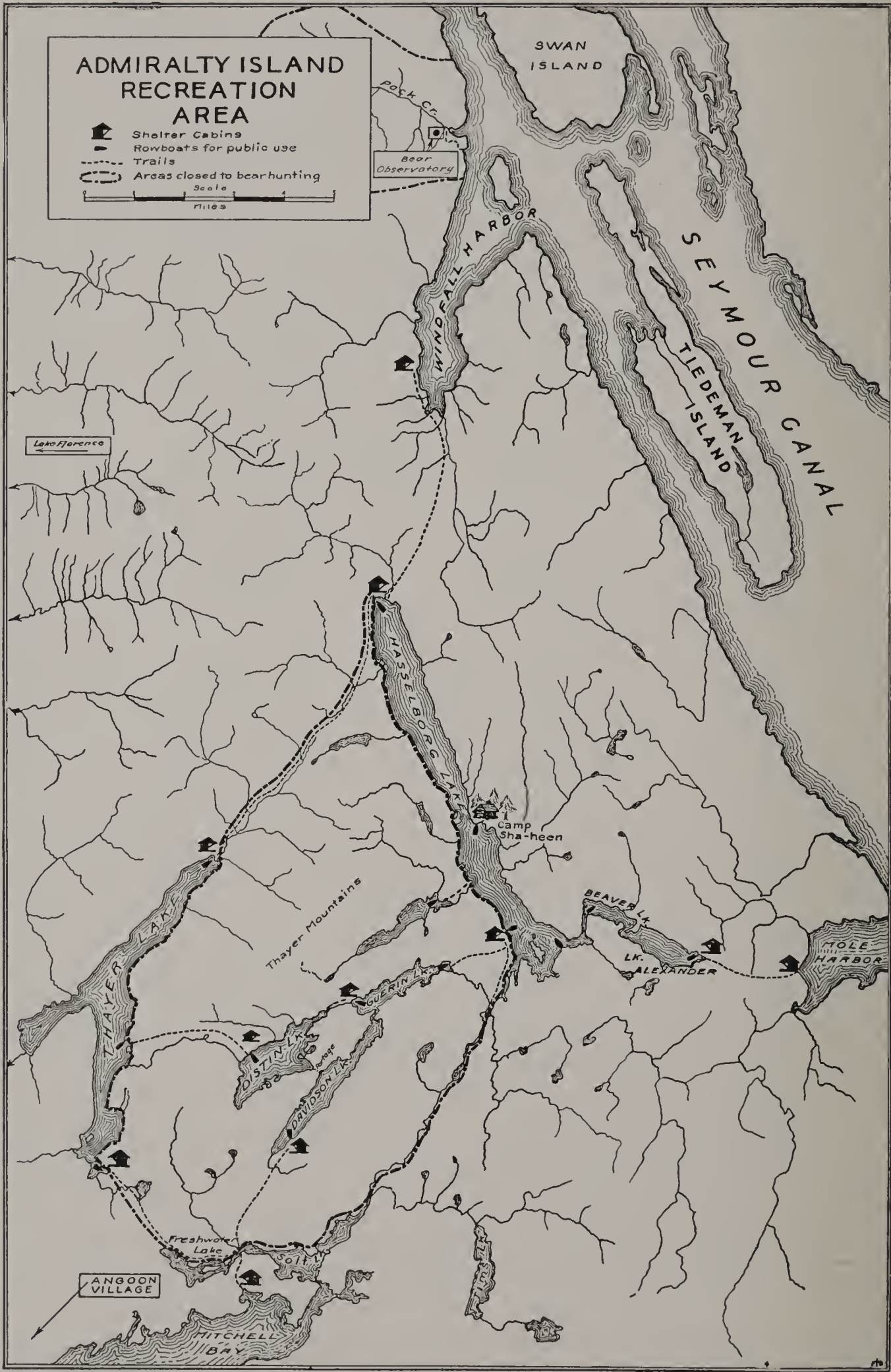
Admiralty Island Recreation Area.—The middle section of Admiralty Island contains a number of scenic lakes ranging in size from small ponds to areas several square miles in extent. The area is a well-rounded, back-country recreation unit on which the Forest Service has placed a system of simple trails, portages, and shelter cabins. It offers excellent fishing, hunting, boating, hiking, picture taking, nature study, and mountain climbing. Here are typical southeastern Alaska conditions, and an outing can be restful and mild or strenuous and wild.

The focal point of the Admiralty Recreation Area is Camp Sha-heen on Hasselborg Lake, 12 miles in length, largest of the Admiralty Island lakes. (See map, p. 12.) Three main trails lead from tidewater to this and the other lakes of the group. One trail starts from Mole Harbor on Seymour Canal, another from Windfall Harbor, and the third from Mitchell Bay on the west side of the island. Most visitors to Sha-heen, however, go by seaplane from Juneau; the one-way trip requires only 25 minutes. Sha-heen Camp has attractive log cabins, which contain all such essential heavy camp equipment as stove, utensils, and bunks. The cabins are open to the public without charge. Thirteen open-front log shelter cabins are located at appropriate points over the recreation area, and light cedar skiffs are available on all the lakes.

A brown bear observatory has been built on the south bank of Pack Creek near its outlet on Windfall Harbor in Seymour Canal. It is a strong, secure platform with roof, guard rail, and seats built around the bole of a large spruce tree and reached by an iron ladder. Pack Creek is much frequented by bears during the salmon spawning season, and the observatory was built to afford a safe, concealed place for photographing the bears while they are catching fish. The creek watershed is closed to bear shooting.

Fishing in Forest Waters.—Fishing on the Tongass can best be described under two classifications, salt-water and fresh-water fishing. They are distinctly different, and both are popular activities. A license for sport fishing is not required.

A comparatively new sport which has taken firm hold in the area is strip fishing for salmon. In this method of fishing the line is dropped over the gunwale of a stationary or drifting boat and allowed to sink to a varied depth, 100 feet or so, for the deep-swimming king salmon and nearer the surface for the coho salmon. The line is then "stripped" in short arm lengths over the hand holding the pole as the hook is being brought to the surface. The lure



Map of Admiralty Island Recreation Area, Tongass National Forest, Alaska.

generally used is a strip cut from the side of a herring. As is the way with fishermen the world over, experiments with new variations of lure, such as plugs, spoons, whole herring, and flies, are constantly being made, but the most popular equipment at present is a rod weighing 6 ounces or more, with agate, porcelain, or rust-proofed metal guides, 600 feet of raw silk line on a heavy reel, landing net or gaff hook, a supply of 1-, 2-, or 3-ounce sinkers, and small spinning hooks of sizes 3-0 to 5-0. Lines of 35-pound test with 15-pound leaders are most popular.

Fishing is good in almost any channel where salmon run. The main seasonal runs of the king vary according to location but usually continue from April to September. The coho run begins in July or August and continues through September. Kings and cohos are practically the only salmon that will take a lure. With a 20- to 40-pound salmon on a light line, or a smaller but more vicious and spectacular fighting coho, a fisherman needs both strength and experience to bring his quarry to gaff, a task requiring at least 20 minutes.

Strip fishing for salmon in the Tongass National Forest, Alaska.



Frequently the salmon fisherman pulls up a small halibut, not a fighting fish but a prize for the dinner table. Black sea bass are also caught.

Some fishermen prefer to troll. Instead of pulling the bait straight up through various levels of swimming salmon, as in stripping, the troller trails his lure, usually a large spoon or a herring, behind his slowly moving boat. Commercial fishermen in the area also use this method, but the sport fisherman uses a light rod and line to provide a sporting touch.

Douglas Ski Valley, near Juneau, Tongass National Forest, Alaska.

F-376787



The important fresh-water species are cutthroat, rainbow, dolly varden, steelhead (in season), and eastern brook trout, the latter an introduced species. Whether it be in a slowly moving creek, a rushing mountain stream, or a cold mountain lake, there are fighting trout in Tongass waters in the abundance to be expected in a primitive region. The Forest Service has built trails and shelter cabins at many of the favored locations, and has made light cedar skiffs available on many of the lakes.

Information about the best fishing spots and how to get there may be obtained by local inquiry. Excellent new fishing streams are being discovered every year. Certain lakes on Baranof and Revillagigedo Islands known to be barren were recently stocked with cutthroat and rainbow trout by the Forest Service.

Winter Sports.—In addition to the skiing and skating facilities near the various communities, now used mainly by local residents, vast unexplored fields of good skiing snow await the skier during at least 6 months of the year. In some of the highest country of the mainland, as in the vicinity of Mt. Fairweather and Mt. Crillon, powder snow is known to exist year-long. The varied terrain presents opportunities for all types of skiing, from the wooded trail to the high open slopes where there are "schusses" several miles long.

Mountain climbing is another sport, usually associated with the winter season, that summer visitors in the Tongass National Forest may enjoy, particularly on the mainland where the mountain bases are more accessible from the various communities. Hundreds of peaks have been unscaled by man.

THE FOREST YIELDS HEALTH—WEALTH—
SECURITY



EVERYBODY LOSES WHEN TIMBER BURNS
BE SURE YOUR FIRE IS OUT—DEAD OUT

Wildlife of the Forest

HUNTERS WITH GUN AND CAMERA from all over the world visit the Tongass National Forest to hunt or view the wild game, principally the Alaska brown bear, the largest of the carnivorous land animals, and his close kinsman and rival in popular interest, the grizzly. Wildlife of great abundance and variety populates the hills, valleys, and waters of this land of beauty. The animals inhabit areas readily accessible, but game management, now being started, guarantees to the American people the perpetuation in large numbers of the game and fur bearers of the region. Nonresidents coming into the Territory are advised to obtain a copy of the Alaska Game Laws from the Alaska Game Commission, and familiarize themselves with the laws and regulations relating to game, land fur bearers, and game birds. The laws and regulations are strictly enforced.

Alaska Brown Bear.—Strangely enough, bear hunting as a sport has few local followers, but "outside" game enthusiasts visit the Tongass Forest in increasing numbers from year to year to try their skill against this premier animal in his native habitat. The annual kill is fully controlled, however, to keep it well below the net increase so there is no danger of annihilating the species. The regulations limit the kill by licensed nonresidents during the open season, September 1 to June 20, to one large brown or grizzly bear a season on Admiralty Island and two, in the aggregate, a season in the rest of the Territory. Pelts are not permitted to be sold, but licensed hunters may transport trophies out of the Territory under certain regulations. A pelt 9 feet square, taken from a bear weighing about 1,000 pounds, is usually considered a good prize; but a good movie of these animals taken in their native habitat is rapidly becoming the most popular "trophy" of all.

"Brownies," in the southeastern Alaska portion of their range, inhabit the mainland as far north as Yakutat Bay and the three large islands, Admiralty, Baranof, and Chichagof, together with adjacent small islands such as Yakobi and Kruzof. The animals may be seen in the months of May and June when they frequent the grasslands at the heads of tide flats shortly after they emerge from hibernation. They may be seen later in great numbers when they congregate along the fish streams. A regulation of the Alaska Game Commission

requires that a nonresident seeking game animals, whether as hunter or photographer, shall employ and be accompanied by a registered guide. Although the natural instinct of a bear is to avoid mankind whenever possible, situations sometimes arise in which a brown or grizzly bear is a distinct menace. Alaska brown bears are wilderness animals and not "park bears" in any sense.

Grizzly Bear.—Smaller than the brown bear, but also fierce and aggressive, the grizzly generally frequents the Coast Range of the mainland. Often it may be seen on the principal drainages such as the Unuk, Chickamin, Stikine, and

Alaska brown bear, Admiralty Island, Tongass National Forest, Alaska.

F-376796



Taku. Its perpetuation is assured by the same regulations which govern the hunting of the Alaska brown bear. Like the brown bear in habits, the grizzly may be observed in the spring on grasslands, on the fish streams when the salmon are running in summer, and on the hill slopes shortly before hibernating in the fall.

Black Bear.—Not regarded by Alaskans as outstanding game, this smaller species so common in continental United States is well distributed throughout the Tongass Forest, although it does not inhabit the islands with the large brown bear. The glacier bear is a rare smoky-color strain of the black and inhabits the great glacier section from Glacier Bay to Yakutat.

Black bears are particularly good camera subjects, and may be seen along easily accessible tidal grassland, on salmon streams, or on the high mountain meadows and slides. Anan Creek, located on the south entrance to Bradfield Canal on the mainland southeast of Wrangell, is a good spot for observing black bears. A trail with observation points along the lower sections of this beautiful stream draws many visitors in the early fall when the bears are attracted by the thousands of salmon which enter the stream to spawn.

Moose.—Occasionally a moose may be seen in the lower Stikine and Taku drainages, probably drifters from upstream in British Columbia, but the real habitat of this animal in Alaska is farther north than the Tongass Forest.

Mountain Goat.—This game animal's natural habitat in the high mountain country above timber line is his best protection against man, for only the most hardy and vigorous hunters or camera enthusiasts attempt to invade his domain. The animals are distributed throughout the high sections of the mainland and are especially plentiful at the head of Texas Creek near Hyder, around Rudyerd Bay and Walker Cove, in the drainage of the Unuk and Chickamin Rivers; also in the vicinity of Muddy River and Le Conte Glacier. Farther north many goat ranges are quite accessible from tidewater; Port Houghton, Tracy Arm, and Fords Terror in Endicott Arm; Speel River and Whiting River in Port Snettisham; Taku River drainage; Berners Bay; and Endicott River. The Forest Service has built trails in many places which lead toward the high goat country. Baranof Island was stocked with goats some years ago by the Alaska Game Commission, and, under protection the year-round, the animals have shown a very satisfactory increase.

Deer.—The local Sitkan deer are a subspecies of the Columbia black tail of the Pacific Northwest. They are ideal local-hunting animals, averaging around 100 pounds dressed, and have finely flavored meat. They are very plentiful and are of considerable economic importance in southeastern Alaska, where they range as far north as Glacier Bay. In the summer and early fall the deer are well back on the high slopes, but in the late fall and winter they descend to the

level sections near tidewater. Deer hunting is good on most of the islands. The mainland has few deer. The number of these animals in the Tongass Forest is not controlled by the intensity of hunting but by the amount of feed available during winters of heavy snowfall.

Predators.—Among the predators are wolves, coyotes, and wolverines. Wolves and coyotes do not inhabit the main brown bear islands—Admiralty, Baranof, and Chichagof—but are known to exist on practically all the other islands and the mainland. Coyotes have recently spread into southeastern

Mountains near mouth of Unuk River at Burrows Bay, Behm Canal, near Ketchikan, Tongass National Forest, Alaska.

F-368238



Alaska, but are not plentiful and range only on parts of the mainland, principally in the few broad river valleys. The wolverine is found over the entire mainland area. All these predators appear to be very destructive to game animals, but the hunted are somehow able to maintain themselves in large numbers.

Fur Bearers.—In the wild state, the fur bearers of the Tongass Forest include the beaver, mink, marten, land otter, weasel (ermine), muskrat, and marmot. Also there are a few blue foxes, not native to the country but escaped from commercial fox ranches.

Native Game Birds.—The upland game birds include the sooty and ruffed grouse, the rare Richardson grouse, and three varieties of ptarmigan. Grouse are never plentiful, but the greatest numbers are on the mainland. The ptarmigan, which as a protective measure changes its plumage from pure white in winter to a speckled brown in summer, is fairly plentiful along timber line and on the mountaintops.

Migratory Birds.—Many ducks and geese nest and breed in the Tongass area and do not migrate south except during severe winters. The largest percentage of those which fall to the hunter are local waterfowl. However, the total of all migratory birds killed on the Tongass Forest is quite small and has little relation to their scarcity or abundance. Among the ducks are the mallard, widgeon, green-winged teal, pintail, and gadwalls. The white-cheeked Canadian goose and the lesser snow goose are popular fowl with local hunters. Rarer are the whistling swan and little brown crane. Migratory game birds may be found in the fall of the year in practically all bays, tide flats, and deltas of the region, while in some favored sections, such as the Stikine River flats, Keku Strait, Big John, Hamilton, Neka, and Sumdum Bays, they are especially plentiful.

Other Birds and Waterfowl.—Other species of birds observed in the region include the merganser (three varieties); harlequin; two varieties each of the scoter, scaup, and goldeneye; loons (four varieties); the tufted and horned puffin; five kinds of auklets; Wilson snipe; turnstone; three varieties of the murrelet; six kinds or more of gulls; Arctic tern; ravens, crows, and the bald eagle. In addition, there are many species of song birds.

PRESERVE NATURAL BEAUTY
HELP PREVENT FIRES

Industries of Interest

COMMERCIAL FISHING.—The most important industry of the region which includes the Tongass National Forest, and one of feverish, thrilling activity, is salmon canning. Active preparations begin in the spring when fishermen overhaul their gear and boats, and canneries ship in supplies and men for the season's work. In this industry there is a large element of chance, for no one knows in advance exactly when or where the salmon will appear or how large the run will be. The greater portion of a salmon's life, which according to species is 2, 3, or 4 years, is spent in the ocean, but the fish is spawned and spends its young or "fingerling" days in a fresh-water stream, and returns to the particular stream of its early days to spawn and die. Varieties caught in Alaska waters are the king salmon (chinook on the Columbia River and spring on Puget Sound) weighing as much as 80 pounds, but averaging about 22 pounds; the Alaska red salmon, known elsewhere as the sockeye and blueback, averaging about 7 pounds; the coho, silver, or medium red salmon, averaging about 8 pounds; the pink or humpback salmon, smallest and most numerous of the species, averaging about 4 pounds; and the chum or keta, usually averaging about 9 pounds.

During the fishing season the various activities of this industry may be observed on the waters surrounding the Tongass Forest. Fish traps are placed at strategic points in shoal waters along the shores where salmon have been known to run, and are visited by cannery tenders every few days for the purpose of brailing (dipping out) the trapped fish. Among the hundreds of busy fishermen are the hand troller in his rowboat; the power troller with four long poles extending from the sides of his gas boat; the purse seiner who uses a net or seine several hundred feet in length, weighted at the bottom and supported at the top by floats, and which is circled around a school of fish; beach seiners who loop their nets out from the shore to enclose a school of salmon; and gill netters who use weighted nets suspended like a curtain across the path of the migrating fish which are caught by their gills in the large mesh of the nets. Rigid Federal supervision insures perpetuation of the fish resource.

Usually located in a picturesque inlet, the salmon canneries are models of

efficiency and fascinating in their appeal. At the canneries the salmon are sorted according to species; dressed and cleaned by the Iron Chink, a machine of remarkable mechanical ingenuity; placed in cans which are sealed by a vacuum process; and finally cooked in a huge retort for 1 hour and 20 minutes at 240°. The cans are labeled and packed in cases at the cannery before they leave for world markets.

Halibut fishing is another important industry in the region. A few halibut banks are located in inshore waters, but the majority are in open waters. Many people find it interesting to watch a halibut boat lay out its "skate" of gear, often dropping it into 300 fathoms of water, each hook baited with a herring. Halibut as large as 300 pounds are not unusual. The fish are not canned but are shipped fresh in ice, or after being frozen solid in the cold-storage plants of the fishing towns. A few salteries and herring packing plants also operate in the Tongass region.

Fur Farming.—The hundreds of small islands on the Tongass Forest possess natural barriers in the form of water boundaries, within which fur-bearing animals can be raised cheaply and safely, and with little change from their wild environment. Consequently, the raising of blue foxes has become an extensive industry. Although fox farming has not been so successful as originally expected, 91 islands are still used in this industry. A few areas on the mainland are also in use for pen raising of the blue fox, silver fox, and mink. As a rule, fur farmers discourage visitors because the sight of strangers disturbs the wild

Be Careful With Fire

THE USUAL precautions and safety rules against fire on national forests are enforced in the Tongass National Forest. Wet weather is common in southeastern Alaska, but during the summer months there are warm and dry periods during which fire will run freely. Fires in this section are hard and costly to fight and difficult to extinguish.

It must be borne in mind constantly that one bad fire will destroy timber and shelter for wildlife besides converting a beautiful woodland into a dreary waste that will take a lifetime to replace. Ever advocate and practice the outdoor code: "BE CAREFUL WITH FIRE—IT PAYS."

animals, especially during the mating season and when the young are still with the mothers.

Mining.—During the Russian occupancy of Alaska, little or no attempt was made to investigate its mineral resources. Copper in the Ketchikan district was the first mineral to be discovered, then gold at the mouths of the large rivers, followed by other discoveries in areas extending into Canada. Later, as prospectors worked up the coast, discoveries were made in the Juneau Gold Belt. In the latter area extensive gold mines were developed, including the Treadwell mines on Douglas Island, closed since 1917, and the Alaska Juneau, which now mines 12,000 tons of ore daily and has the distinction of operating upon the lowest grade ore of any profitable gold lode mine in the world. Other large-scale producers are the Chichagof and Hirst-Chichagof mines. Most of the mines are small and still in the prospect stage, awaiting capital for extended development.

Unloading scow load of salmon at cannery, Tongass National Forest, Alaska.

F-253237



Indian Tribes and Customs

THREE MAIN TRIBES of Indians inhabit the Tongass region, the largest and most widely distributed of which is the Thlinget, a name meaning literally "the people." Another native tribe is the Haida, believed by many authorities to be an offshoot of the Thlingets. The third tribe is the Tsimpsonian, a word meaning "in the Skeena" or living along or on the bank of the Skeena, a large river of British Columbia.

The Haidas in the early days of white occupation were distinguished for their prowess in war, their large sea-going dugout canoes, and their venturesome sea roving.

The Tsimpsonian tribe lived originally at Old Metlakahtla near Fort Simpson in British Columbia, but migrated to a new Metlakahtla on Annette Island, near Ketchikan, in 1887, under the leadership of a famous missionary, Father Duncan.

The traditions of the tribes and other evidence seem to indicate that, contrary to a widely held view, they are not of comparatively recent Asiatic origin, but American, coming from the south rather than the west. Slavery and human sacrifice were prevalent among them as late as 1880.

The old Indian villages, many now abandoned in favor of more modern towns, are rich in archeological interest. Among the deserted villages are Howkan, Klinkwan, near the entrance of Klakas Inlet, and Old Tuxekan, at the narrows in Tuxekan Pass, all on the west coast of Prince of Wales Island; also Old Kasaan, now a national monument, on the shores of Skowl Arm on the east side of the island.

The most striking feature of native art is the totem pole, of which many specimens are 30 to 50 feet high. A knowledge of the social forms developed by the Indians is necessary to an understanding of the significance of the carved figures on these poles. Tribal laws, customs, and usages covering kinship, marriage, property, and descent are revealed to the initiated by the intricate carvings of animal, bird, and fish figures. The people reckoned kinship through the mother. The boy's position in society and his prospects for riches and marriage depended upon the totem crests he inherited from his mother's brother. They showed his claim to distinction.

Many of the large totem poles which had been deteriorating in the abandoned villages are now being restored or duplicated, under the supervision of the Forest Service, by the few remaining Indian totem carvers. The restored totem poles will be permanently exhibited at Saxman, New Kasaan, Wrangell, and Sitka. During the spring of 1939 the Forest Service with the aid of the CCC began the reconstruction of an Indian village on Tongass Highway close to Ketchikan, including an authentic community house, dwellings, and totem poles portraying accomplishments of a primitive people in the material arts. Another community house has been restored in Wrangell.

Totem poles and remains of community house, Old Kasaan Village, Kasaan National Monument, Tongass National Forest, Alaska.

F-253205





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Town of Wrangell, Tongass National Forest, Alaska.—Photographed by Alaska Aerial Survey Expedition of the Navy Department conjointly with the Forest Service and Geological Survey, 1929.

Towns and Forest Highways

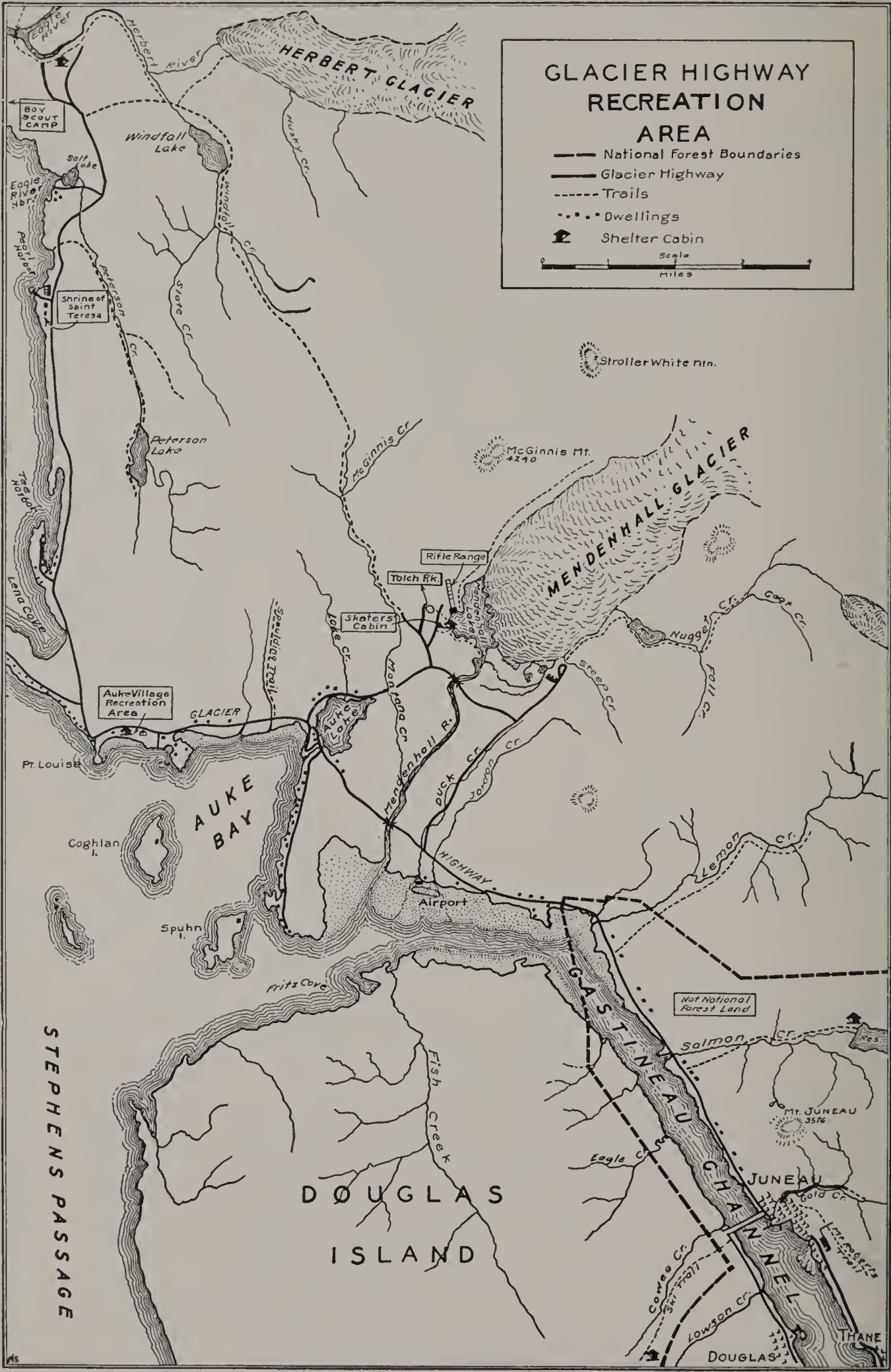
THE VARIOUS TOWNS in the Tongass region are surrounded by dense forests, but they have most of the necessities and conveniences of small modern cities in the continental United States. Each has its individual and interesting setting, and only two are connected by a highway.

Sitka.—The center of Russian activities until 1867 and the capital of the Territory until 1900, Sitka is the shrine of Alaska history. Founded by Alexander Andreevich Baranof in 1799, the original Sitka settlement was totally destroyed in 1802 when more than 150 men were massacred by the Sitkan branch of the Thlinget Indians, known to the Russians as the "Kolosh." Recovered by Baranof 2 years later, this far post of the Russian American Company was rebuilt 6 miles farther south on its present site and given the name of New Archangel. The new settlement became the center of industry and trade. Its warehouses were crammed with thousands of the richest furs of the Northland. On nearby shores, about 1836, the first steam vessel built in the north Pacific was launched. Sitka's foundries cast many of the bells for California's Franciscan missions. It was at Sitka that the formal transfer of Alaska from Russia to the United States took place, on October 18, 1867.

An aerial view of this oldest town in southeastern Alaska appears on the front cover of this publication. It has lately started to grow again, and its present population is about 2,000.

Indian features of interest at Sitka include the Sheldon Jackson School for natives, conducted by the Mission Division of the Presbyterian Church of the United States; a splendid array of totem poles and famed Lovers' Lane in the Sitka National Monument; a museum; and an Indian village of about 700 persons. The famous Saint Michael's Cathedral of the Russian Greek Church is one of the remaining evidences of Russian occupation. Other historical features are Russian burial grounds, several dwellings, and a restored blockhouse originally erected for protection against the Indians.

Mt. Edgecumbe, an extinct volcano similar in appearance to Fujiyama of Japan, is a conspicuous feature of a nearby island as viewed from the town. A national-forest recreation area is located about halfway between the present town and old Sitka and contains a log community building, shelter cabins, and picnic



Map of Glacier Highway, Tongass National Forest, near Juneau, Alaska.

facilities. Good trails connect the town with nearby points of outdoor interest.

Wrangell.—The second oldest town in southeastern Alaska with a present population of 1,142. It is the gateway to the Stikine River, a stream that has carved its way through the Coast Range Mountains and drains an immense wilderness far inland in northern British Columbia. The river is navigable from Wrangell to Telegraph Creek, B. C., a distance of 160 miles.

A national-forest recreation area with a large log community building, picnic tables, children's playground, and water supply is within easy walking distance of the town. A ski run, three-fourths of a mile in length, may be reached by way of the short Wrangell Highway.

Christened Fort Dionysius by its Russian founder, Lieut. Dionysius Zarembo, the original settlement at what is now Wrangell was made in 1833 to further the Russian fur trade and to guard the rich Stikine Valley, gateway to the vast interior area. Constantly on watch against the warlike Thlingets, the Russians traded for furs at the portholes of their fort. The Hudson's Bay Company, their strongest rival for the fur trade, had previously explored the mouth of the Stikine River and pronounced it navigable. In 1834 an attempt was made to sail a British brig past the new Russian fort in order to establish a trading post above the boundary which would cut off the supply of furs from the interior. The expedition was turned back by the Russians and Indians. Later the Hudson's Bay Company negotiated a lease for the mainland from Portland Canal to Cape Spencer. The outpost was renamed Fort Stikine, and for more than 20 years was the center of British fur-trading activities. When the United States purchased the Territory, it was named Wrangell. In the history of the period of Russian and British occupancy the famous Indian chiefs "Shakes" and "Kadashan" were prominent, and their totems and tribal relics may still be seen at Wrangell.

Gold was discovered on the Stikine by Buck Choquette in 1861. The next year hundreds of prospectors passed through Stikine Village, as Wrangell was then called, on their way up river to the new diggings. Many were disappointed, for the deposit of gold was not extensive. In 1872 a new discovery at Dease Lake, in the country later called the "Cassiar," brought another horde of gold seekers through Wrangell, and the town boomed. In a few years this golden stream declined and men left for other fields, but the Stikine was fated once again to welcome large numbers of prospectors, for during the Klondike strike thousands began the long journey to the interior of Alaska and the Yukon at Wrangell, to continue by way of the Teslin Trail.

Juneau.—The largest city in Alaska, the Territorial capital, has a population of 5,748 people. The Juneau community, including the town of Douglas and other surrounding settlements, has a total population of about 7,500.



Pastoral scene along Glacier Highway, Tongass National Forest, Alaska.

Juneau owes its establishment to the discovery of gold. In 1880, two prospectors named Richard Harris and Joe Juneau were sent to Gastineau channel from Sitka by a mining operator who had seen some ore samples found by Chief Kow-ee of the Auke tribe. On August 17 they stopped on a large stream from which they "washed out" so much gold that the stream was named Gold Creek. Higher up, in Silver Bow Basin, they discovered rich gold quartz. Within a few months people from Sitka and vicinity crowded the new camp, first called Rockwell, then Harrisburg, and finally Juneau. A year after the discovery, quartz locations were made immediately across Gastineau Channel on Douglas Island and the famous Treadwell mine began operation. This mine ran for 36 years and produced \$66,000,000 in gold prior to the unfortunate cave-in in 1917, paying some \$27,000,000 to the stockholders in dividends. The principal economic support of Juneau is now the Alaska Juneau Gold Mine, which operates 24 hours a day the year round and employs about 1,000 men, with an annual pay roll of more than \$1,000,000. It is also the trading center for a large surrounding district containing mines, canneries, fur farms, and small fishing towns. Juneau, with its large modern cold-storage plant, serves more as a gathering point for salmon and halibut than as a fishing center.

Juneau was made the capital of Alaska in 1900, but the executive office was not moved from Sitka until 1906. Now it is also the headquarters of practically all Federal agencies in the Territory, including the regional office of the Forest Service. The Territorial Museum and Library, located in the capitol, has a splendid collection of archaeological and historical articles pertaining to Alaska, open to all visitors.

Juneau and immediate vicinity are rich in recreation opportunities. Evergreen Bowl is a natural amphitheater located within and developed by the city and containing tennis courts, wading and swimming pools, baseball diamond, and other features. At Thane, 3 miles south of Juneau by highway, is a golf course often referred to as the "million-dollar golf course" because it is located on the tailings of a costly defunct gold mine. Two popular hiking trails begin at Thane, one leading inland to Sheep Creek Basin and the other south along the shore of Gastineau Channel. The ascent of Mount Roberts by a trail that starts inside the city limits of Juneau and affords a breath-taking view of the surrounding country at heights of between 2,000 and 3,600 feet makes a short and pleasant hike. Another hike, 4 miles long, may be made along the fine trail leading up the deep mountain gorge of Gold Creek, a rock-walled valley between mountains of from 3,000 to 5,000 feet in height.

Glacier Highway (see map, p. 28), beginning at Thane and running in a general northerly direction through Juneau and north to Herbert River, is 44

miles long, including a few spurs and a loop road around Auke Lake. This good gravel road is the principal recreation facility for the people of Juneau, and it is also steadily adding to the suburban population (1940 census, 839), as settlers locate on the many groups of home sites laid out by the Forest Service along its right-of-way. Two miles north of Juneau a trail leads to Salmon Creek Reservoir, stocked with eastern brook trout. About 3 miles farther out is a trail leading to Lemon Creek Glacier, a 6-mile hike.

Skating in front of Mendenhall Glacier, Tongass National Forest, Alaska.

F-376789



Some 12 miles from Juneau on the Loop Road is Mendenhall Glacier, a huge remnant of the ice age. It originates in a great ice sheet of many square miles in the heights of the Coast Range Mountains. This particular ice sheet feeds the Mendenhall and seven other large glaciers that flow down deep mountain valleys in this portion of the Tongass Forest. The Mendenhall Glacier extended over the entire length of Mendenhall Valley about 150 years ago and discharged directly into tidewater, but the forward movement of the ice has practically stopped, and the lower end of the glacier has now receded 5 miles inland from the sea. Green forests and acres of lupines and other flowers grow close to the sides of the ice stream.

One of the most photographed spots in Alaska is Auke Lake, a smooth, forest-fringed sheet of water reflecting the great glacier and nearby peaks, and encircled by the Loop Road. It affords fine boating and fishing in summer and skating in winter. Beyond this and adjoining the main highway at Mile 16 is the Auke Village Recreation Area and bathing beach on the site of the abandoned Auke Indian Village. Here the Forest Service has built of logs a community picnic house containing a large fireplace of granite boulders. Other recreation facilities here are bathhouses, picnic shelter, cooking equipment, fireplace, and woods trails. At nearby Tee Harbor is a favorite salmon fishing ground and a scenic view of sea channels, islands, and snow-covered mountains. The Shrine of Saint Teresa, a retreat constructed by the Catholic Church on a beautiful timbered islet a few yards from shore, may be seen near Pearl Harbor. Numerous trails leave the highway for fishing streams, high goat ranges, trapping country, and gold-mining camps.

Skagway.—Skagway also owes its birth to gold, not as a mining town but as the nearest port of entry to the famous gold fields of the Klondike and Yukon, the discovery of which electrified the world in 1897. Ship after ship brought thousands of people to the head of Lynn Canal and dumped them and their freight on the beach. From there the strong and courageous struggled through to Lake Bennett, some going by way of the White Pass and others through Chilkoot Pass, the latter beginning at Dyea, now a ghost town, about 4 miles from Skagway. Popular fiction has not exaggerated the hardships encountered on these trails during the summer of 1897 and the following winter. The White Pass Railway from Skagway to the head of navigation on the Yukon River, construction of which was begun in 1898 and completed 2 years later, provided a much easier means of access to the Yukon. In addition to the perils of the trail, the gold seeker of '98 faced the pitfalls of the gambling dens and dives of Skagway, controlled by "Soapy" Smith and his gang. Many lost their "pokes" before July 8, 1898, when the leader was killed by a member of a citizens' committee and the gang dispersed. Relics of "Soapy" Smith are

among the historical items popular with the present-day visitor to Skagway.

The teeming thousands of the gold-rush days have dwindled until the population of this historic town is now only 633. The principal activity is the operation of the White Pass and Yukon Railway, which provides transportation between the coast and the head of navigation on the Yukon River. Skagway is particularly noted for its production of fine flowers and vegetables. Recreation trails in the vicinity include the Dewey Lake and S-Glacier Trails.

Ketchikan.—Located some 600 miles from Seattle, Ketchikan owes its existence to the tidal wave of salmon that annually crowds into the nearby spawning streams. More salmon are packed in Ketchikan's 10 canneries than in any other town in the world. It is primarily a fishing center, with well-developed facilities for handling salmon and halibut in their many marketing forms, and its resident population, normally 4,601, is considerably larger during the active fishing season. When "the fishing fleet is in," there is a forest of masts in Ketchikan's small-boat harbor.

Lumbering is also an important industry in Ketchikan, with a modern, electrically driven sawmill and other timber-using plants. Ketchikan is the first white town in Alaska to own all of its public utilities. It has an attractive park containing a large collection of totem poles, ball ground, tennis courts, public playgrounds, and a permanent building for local fairs. An important field office of the Forest Service is located here. Ketchikan Creek, which flows through the center of the town, is a source of interest, particularly in the autumn, when hordes of salmon may be seen jumping the falls on their way upstream to spawn.

Tongass Highway (see map, p. 38), a good gravel-surfaced road and one of a number of national-forest highways radiating out of the principal communities of the Tongass Forest, extends for 23 miles along Tongass Narrows north and south of the town. It is flanked by small homesteads, attractive summer residences, and forest recreation areas. The southern section runs through the typical Indian village of Saxman, southeast of Ketchikan, where many totem poles are to be seen. Sandy beaches, with facilities for bathing and picnicking, are available along the highway. Deer are often seen along this road.

The section of the highway to the north reaches salmon canneries and other industrial plants on the outskirts of town and continues on past the well-protected small-boat anchorage of Ward Cove, the Refuge Cove Campground, and a "primitive forest" composed of a small block of exceptionally fine Sitka spruce and western hemlock timber.

A short spur road from the main highway leads into the Ward Creek Recreation Unit (see map, p. 38), an entire drainage area of 12,800 acres of

national-forest land, which has been dedicated to public recreation use exclusively. Centered at Ward Lake in this watershed are a large rustic community house with fireplace, bathhouses, bathing beach, floats, diving tower, rowboats, and picnic spots with tables and cooking fireplaces. Ward Lake becomes a popular skating rink during winter months. An attractive road leads to a

Town of Skagway, Tongass National Forest, Alaska—looking toward the famous White Pass.—Photographed by Alaska Aerial Survey Expedition of the Navy Department conjointly with the Forest Service and Geological Survey, 1929.

FS-Z38





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Town of Petersburg, Tongass National Forest, Alaska.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department
conjointly with Forest Service and Geological Survey, 1929.

second, more isolated lake, where there is good fishing. Skiing facilities have been provided. Simple trails and blazed travel lines open many interesting places on the watershed to hikers. Hunting is prohibited, and an effort is being made to build up the population of local birds, game, and fur bearers.

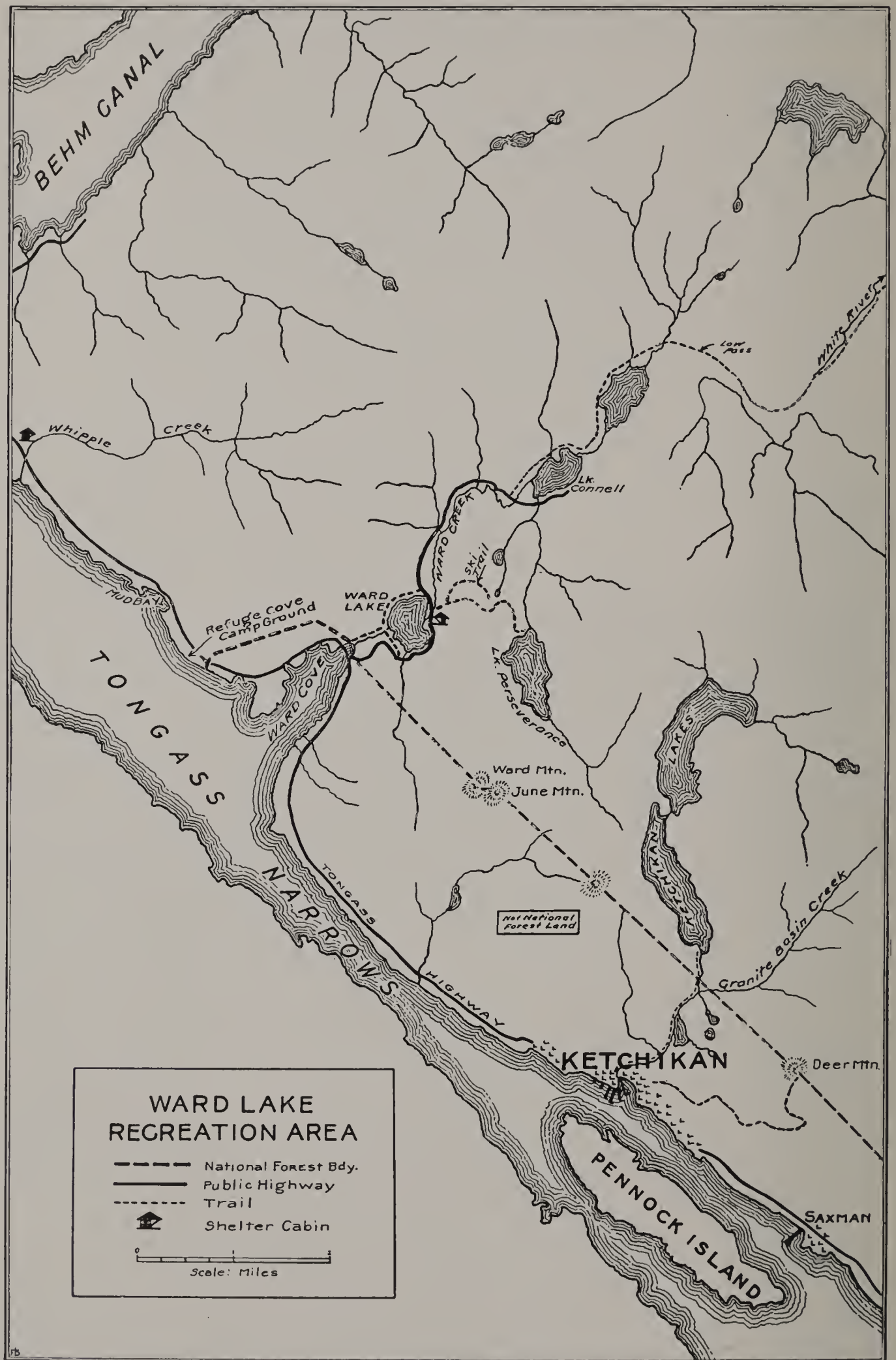
A rifle range with a maximum firing point of 600 yards is located on Tongass Highway a short distance north of Ward Cove.

Petersburg.—This town is located at the north entrance to Wrangell Narrows. Its 1,288 residents are mostly fishermen of Scandinavian extraction. Mitkof

Trolling boats at Ketchikan, Tongass National Forest, Alaska.

F-253859





Map of Ward Lake Recreation Area, Tongass National Forest, Alaska.

Highway leads out of town for 11 miles along the shores of the Narrows, and the bordering lands are a refuge in which deer and other types of wildlife may frequently be seen. Falls Creek and other areas provide the town with suitable facilities for picnics, swimming, boating, and skating. The Forest Service has built a good close-in ski jump for the use of the local people, who have a natural inclination for the sport. The town is the headquarters of the Petersburg Division of the Tongass National Forest.

Metlakatla.—Composed exclusively of Tsimpsian Indians, this village is located on Annette Island 15 miles south of Ketchikan, and has a population of 674. Tourist steamers do not call here, but stop-over visitors at Ketchikan can visit it by launch or airplane. With an Indian mayor and council, it is one of the best governed towns in Alaska and an example of progress by a primitive people. Its municipally owned large salmon cannery is the chief feature of a satisfactory local economy. Cooperative enterprises (sawmill, retail store, etc.) are operated. Electricity and domestic water are provided free of cost to all homes by the municipality. The community has the largest and finest recreation hall in Alaska, and its basketball team and brass band are highly regarded by other native and white towns.

Hyder.—A small mining town of only 97 people, located at the head of the 100-mile-long fiord called Portland Canal. The Salmon River Highway and tributary roads, totaling 24 miles in length, which were built to open up mining sections of the rugged, high-mountain country in this locality, offer excellent mountain and glacier scenery, as well as possibilities for hunting grizzly bear and goats.

Craig.—This principal town of the west coast of Prince of Wales Island is 110 miles from Ketchikan by water and has a population of 501, of whom about two-thirds are Indians. It is the trading, fishing, and logging center of the region. One may travel from here for many days in a small launch along a labyrinth of remote, quiet waterways, and past low-lying jigsaw-puzzle islands, clothed with forests and containing interesting Indian villages, fishing streams, and wildlife ranges.

Klawak and Hydaburg.—These native villages are in the vicinity of Craig, the former about 7 miles north and the latter some 35 miles south. Hydaburg is a modern village of the once locally powerful Haidas, the Indians of the highest culture on the Pacific coast. Their town government is similar to that of Metlakatla. The Klawak population is composed of Thlinget Indians, the most numerous and widely distributed tribe of southeastern Alaska. According to the 1940 census, Klawak has a population of 455 people and Hydaburg 347.

Douglas.—Lying almost directly across Gastineau Channel and joined with Juneau by a steel bridge and highway is the town of Douglas. It is the site of



FS-Y1
Mainland Lynn Canal, Chilkoot Barracks, and Haines, Alaska.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.

the long famous Treadwell Mine, with the "Glory Hole" still visible as a mute witness to the bygone days when its great stamp mills were the wonder of the mining world. The town population has dropped to 521 people. Good skiing facilities have been provided on the Douglas ski grounds on the mountains back of the town. The Juneau Ski Club sponsors a yearly ski meet here which attracts skiers from all parts of southeastern Alaska.

Haines and Chilkoot Barracks.—The beautifully situated little town of Haines and a small Army post are located about 15 miles from the northern tip of Lynn Canal. They form the gateway to the large Chilkat and Klehini River valleys and have a road leading inland to Pleasant Camp on the Canadian side of the international boundary, the scene of early-day mining operations and the locale of the famous Dalton Trail.

Kake.—A native village of about 400 people located on the northwest end of Kupreanof Island. It is a well-kept community in the center of a good fishing and deer-hunting district.

Port Alexander.—A trollers' town located on the southern tip of Baranof Island. Hundreds of small commercial fishing boats make their headquarters here during the salmon trolling season off Cape Ommaney.

Angoon.—A native fishing village of some 350 people located on the west shore of Admiralty Island.

Hoonah.—A native village on the northeast shore of Chichagof Island. Its population is about 600.

Tenakee.—A small fishing village and trading center on the west shore of Chatham Straits.

Yakutat.—An isolated Indian community of 322 people, situated on the Gulf of Alaska at the northern tip of the Tongass Forest. Employment in the local salmon cannery and trapping are the principal means of livelihood.

BE EXTRA CAREFUL WITH FIRE,
CIGARETTES, AND MATCHES—ALWAYS URGE
OTHERS TO BE CAREFUL—ALWAYS



Juneau, capital of Alaska. Town of Douglas in foreground.

Glaciers of the Region

THE GLACIERS of Alaska are of two types: The Piedmont, which is a fan-shaped expanse of ice at low elevations, is formed by the coalescing of several "alpine" glaciers as they leave their mountain valleys. A fine example is Malaspina Glacier on Mt. St. Elias near Yakutat, embracing about 1,500 square miles. The Alpine or Valley is a river of ice which winds down the valleys from permanent snowfields in the high mountains. Examples in the Tongass National Forest are the Taku and Mendenhall Glaciers.

The glaciers result from the heavy precipitation along the southern Alaska coast which brings a greater snowfall to the high mountain areas than can be melted in the short summer. The excess forms extensive snow and ice fields (the snow changing to ice under the pressure of its own weight). Such a snowfield extends along the crest of the high mountain range between Taku River and Skagway Summit, a distance of 85 miles, and gives rise to 10 large glaciers, the most prominent of which are Taku and Mendenhall.

The ice of a glacier does not move as a rigid mass on a sloping surface, but flows as if it were a viscous fluid, such as pitch or tar. Although brittle, it yields under pressure of its own weight and undergoes slow flowage. The general rate of flow ranges from 1 foot to as much as 60 feet per day, depending upon the size of the glacier, the shape and width of its bed, and climatic conditions. The Muir Glacier in Glacier Bay has been found to move 7 feet or more a day at its outlet, or about 2,500 feet per year. In glaciers with receding fronts the forward movement is more than offset by the melting of the snow.

The fronts of many glaciers appear to have alternately advanced and receded over relatively short periods, perhaps hundreds of years. The cause may be slight changes in climate, or in individual cases, a shift in weight from one part of an icefield to another part, as a result of earthquakes. In general, the glaciers of North America are now receding, but some are advancing. Taku Glacier has made a steady and substantial advance in the last 6 years, following a period of recession. In some cases, as at Mendenhall, forests have grown up on lands bared by retreating glaciers, only to be sheared off by a succeeding ice advance. A later retreat exposes the forest remains.



GS-24

Taku Glacier, Tongass National Forest, Alaska.—Photographed by Alaskan Aerial Survey Expedition of the Navy Department conjointly with Forest Service and Geological Survey, 1929.

Flowers and Small Plants

THE PROFUSION of wild flowers throughout the Tongass Forest is further evidence of the ameliorating influence of the Japan Current which bathes the southern shores of Alaska and causes mild winters. The long summer days of the far-north latitude also favor a great variety and luxuriant growth of flowers.

Alaska's official flower, the forget-me-not, grows throughout northern and central Alaska, but only as far south as Haines in the Panhandle.

The open meadowlands on the mainland from Portland Canal to Skagway are literally blanketed with flowers. In the drier meadows and alpine slopes are the fire weed, columbine, aster, paintbrush, Alaska rose, primrose, meadow rue, and goldenrod. In the more moist sites are the shooting star, buttercup, touch-me-not (jewelweed), wild rose, foxglove, bluebells, anemones, gentian, and spring beauty.

In the marshlands or muskeg areas the beautiful marsh marigold, bog rosemary, Labrador tea, Alaska waterlily, Alaska iris, and Alaska cotton make luxuriant growth. Of these, Alaska cotton is probably the most unusual, as its blossoms are very similar to the cotton of the South. The clusters of white or light brown bolls setting on top of long reedlike stalks adorn many of the meadows near Juneau.

Growing in the moist soil and leafmold of the coastal forest are gold thread, star flower, lily-of-the-valley, yellow and blue violets, bunch berry, spring beauty, and bluebells.

Also in the field of flowering plants might be listed the forest shrubs: Cranberries, huckleberries, blueberries, red and black currants, salmonberry, lagoonberry, thimbleberry, wild strawberry, false azalea, and salal. All but the two last named supply large quantities of edible berries to the local residents.

Other edible plants (herbs) are the goose tongue and wild parsley growing along the high tide lines of the coast, which supply delectable substitutes for greens, and wild rice and cucumber plants along the drier hill slopes, which offer a pleasant substitute for potatoes. The coast-type devilsclub, so called because of its formidable spines, abounds in the Alaska forests and is attracting great interest, since medical science is experimenting with its extracts as a possible substitute for or supplement to insulin in the treatment of diabetes. The Indians of Alaska have long used the devilsclub brew as a tonic.

Transportation Facilities

NO HIGHWAYS OR RAILROADS connect Alaska with the continental United States, but three American steamship lines and one Canadian line serve southeastern Alaska the year round. Another Canadian line operates during the summer only. During May to September, hardly a day passes without some ship calling at ports of Ketchikan, Wrangell, Petersburg, Juneau, Haines, Skagway, and Sitka. A weekly schedule is maintained during the remainder of the year. Tourists may spend a number of hours ashore at various ports.

On a steamship tour of the waterways of the Tongass National Forest a special wardrobe is unnecessary. Informality rules on these tours and sport clothes are entirely suitable. Ladies who prefer to dress for dinner often include an informal dinner gown. A raincoat for wet weather ashore and topcoat for evenings are essential. For hiking or fishing the usual field clothes are necessary, especially shoe pacs or rubber boots.

Flying boat and pontoon airplanes are well-adapted for travel on the Tongass and are used extensively. Stop-over tourists sometimes use them in visiting favored spots within a wide radius of a central location. Flights are frequently made from Seattle to Alaska, but not on regular schedule. Local seaplanes, radio-equipped and piloted by experienced fliers, are available for charter at a reasonable charge by the hour or trip.

*Call on the regional forester, Juneau, or the forest rangers at
Ketchikan, Petersburg, or Juneau, for further information.*

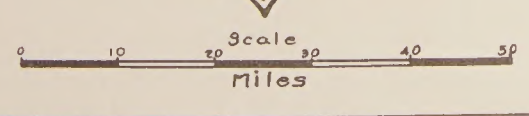
They will be glad to assist you.

The Pan American Airways System now maintains a regular schedule between Seattle and Alaska of not less than two round trips each week. Fourteen passenger, twin motored planes make the trip from Seattle to Juneau in five hours.

NORTH
PACIFIC
OCEAN

**TONGASS
NATIONAL FOREST**

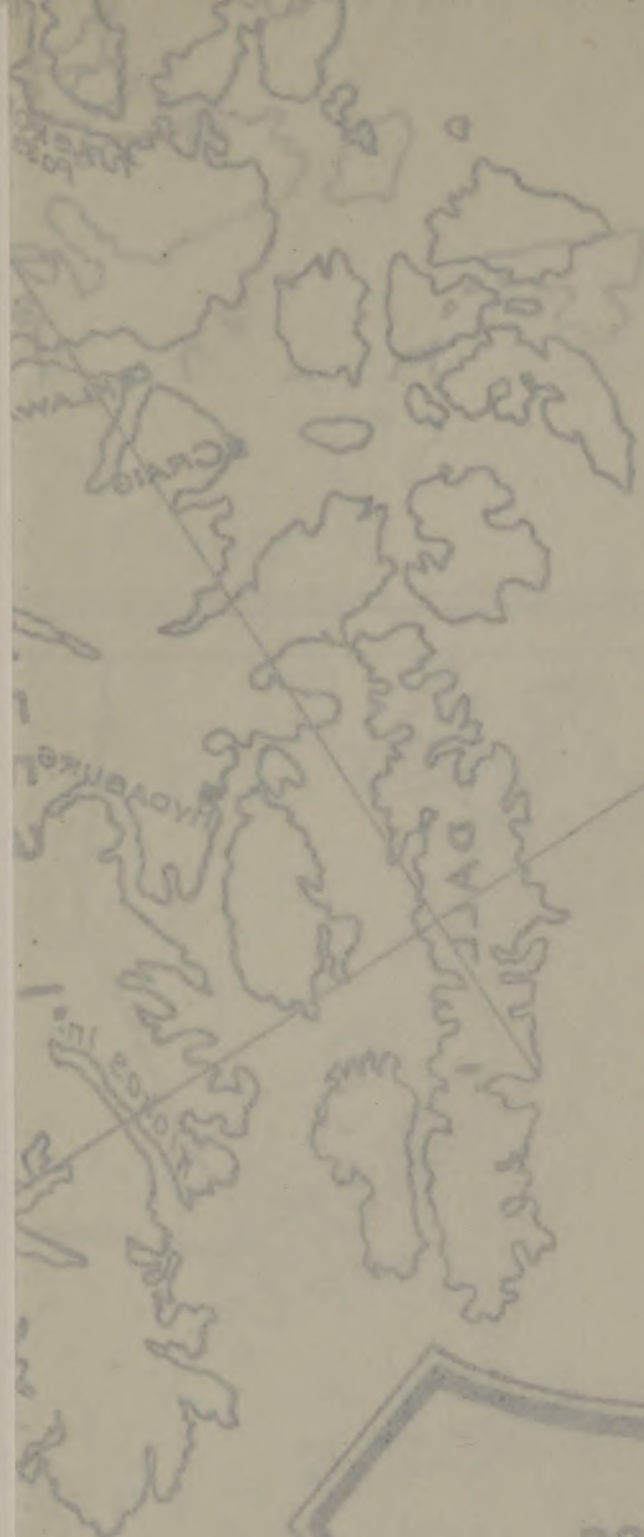
REGION OF
FIORDS AND FORESTS
NATURE
UNCHANGED



TONGASS
NATIONAL FOREST

REGION OF
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